

Notice of Allowability

Application No.

09/856,634

Examiner

Paulos M. Natnael

Applicant(s)

KOHASHI ET AL.

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment received August 4, 2005.
2. ☒ The allowed claim(s) is/are 1-11.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

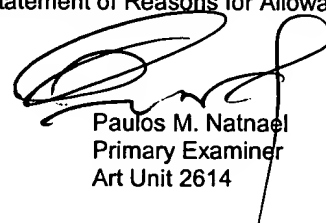
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Paulos M. Natnael
Primary Examiner
Art Unit 2614

DETAILED ACTION

1. Drawing submitted May 24, 2001 and the replacement received August 4, 2005 are acceptable to the examiner.

Allowable Subject Matter

2. Claims 1-11 are allowed.
3. The following is an examiner's statement of reasons for allowance: the prior art fails to disclose a combination of the following limitations comprising: an image processing apparatus comprising image input/output processing means for inputting/outputting an image; a memory which shares different types of image data by a time division, encoding/decoding processing means for encoding or decoding data stored in the memory; data transfer control means for controlling a data transfer from the memory to the image input/output processing means or the encoding/decoding processing means, a first data transfer group, which can be scheduled for direct memory access, is divided into burst transfer units; a direct memory access of the burst transfer units is periodically performed, and a second data transfer group, which cannot be scheduled for direct memory access is subjected to the direct memory access during at least a portion of the period that the first transfer data group is not subjected to the direct memory access; wherein an in-progress direct memory access of the second transfer data group is suspended during a scheduled direct memory access of the first transfer data group, as in claim 1;

an image processing apparatus comprising image input/output processing means for inputting/outputting an image; a memory which shares different types of image data by a time division method; and data transfer control means for controlling a data transfer from the memory to the image input/output processing means or the encoding/decoding processing means, wherein the data transfer control means comprises encoding/decoding processing means for encoding or decoding data stored in the memory; direct memory access request generating means for generating a transfer timing of data which can be previously subjected to the direct memory access scheduling; direct memory access request adjusting means for performing adjustment so as to interrupt the direct memory access with the encoding/decoding processing means and preferentially execute the direct memory access of the image input/output processing means in the case where the direct memory access request is made from the direct memory access request generating means; direct memory access settings holding means for holding setting information of the direct memory access; data transfer executing means for generating an address of the memory on the basis of direct memory access setting information to transfer data by an instruction from the direct memory access request adjusting means; and memory control means for controlling writing or read-out of the memory, as in claim 3; and,

an image processor configured to input and output an image; a memory; and data transfer controller configured to control data transfer from said memory to said image processor or an encoder/decoder, said data transfer controller comprising: a direct memory access request generator configured to schedule direct memory access

a direct memory access interrupter configured to interrupt direct memory access with said encoder/decoder and to execute scheduled direct memory access of said image input processor if direct memory access is request by said direct memory access request generator; a store configured to hold setting information of direct memory access, a data transfer executor configured to generate an address of said memory based on at least direct memory access setting information to transfer data by an instruction from the direct memory access request adjustor; and a memory controller configured to control writing or read-out of the memory, as in claim 11.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paulos M. Natnael whose telephone number is (571) 272-7354. The examiner can normally be reached on 10:00am - 6:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571)272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2614

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paulos M. Natnael
Primary Examiner
Art Unit 2614



PMN
October 14, 2005